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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/444,298	11/22/1999	MAMORU NISHIMURA	PM-265035	8478

7590

06/17/2003

LARRY S. NIXON
NIXON & VANDEHYE P.C.
1100 NORTH GLEBE ROAD, 8TH FLOOR
ARLINGTON, VA 22201

EXAMINER

TRAN, HIEN THI

ART UNIT

PAPER NUMBER

1764

DATE MAILED: 06/17/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/444,298

Applicant(s)

NISHIMURA ET AL.

Examiner

Hien Tran

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/22/99 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 6-7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 10-11, it is unclear as to where the "insertion" is disclosed in the specification.

Allowable Subject Matter

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1, 5 and 7, 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamaguchi et al (4,849,275) in view of Leyrer et al (5,371,056).

Hamaguchi et al discloses a honeycomb structural body comprising: a plurality of cells having through-holes formed by providing partition walls composed mainly of cordierite which has the chemical composition SiO₂: 45-55%; Al₂O₃: 33-42%; MgO: 12-18%, in a honeycomb fashion (abstract), a pore volume of said partition walls being at least 30% (col. 3, lines 21-28), mean size of fine pores in the partition walls is 1-10 μm (col. 3, lines 28-30), said honeycomb structural body being a catalyst carrier for the internal combustion engine, the catalyst carrier having a catalyst loaded on the surface of the partition walls (abstract).

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The apparatus of Hamaguchi et al is substantially the same as that of the instant claims, but fails to disclose the specific cell density and the roughness surface as claimed.

However, Leyrer et al discloses provision of a cordierite catalyst honeycomb having a cell density of 100 cell/cm² (645 cells/in²) and a roughness surface which falls within the instant range.

It would have been obvious to one having ordinary skill in the art to select an appropriate roughness surface with specific density as taught by Leyrer et al in the apparatus of Hamaguchi et al so as to enhance catalyst coating and to have a more efficient catalyst carrier.

9. Claims 3, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamaguchi et al (4,849,275) in view of Leyrer et al (5,371,056) as applied to claims 1, 5, 7, 9-11 above and further in view of Abe et al (5,680,503) or Hamanaka et al (5,938,992).

The apparatus of Hamaguchi et al is substantially the same as that of the instant claims, but fails to disclose the specific thickness of the partition walls as claimed.

However, Abe et al and Hamanaka et al discloses provision of a cordierite catalyst honeycomb having a cell density of 600 cells/in² and thickness of 40 μ m which falls within the instant range (col. 8, lines 39-40 in Abe et al and col. 4, line 52 in Hamanaka et al).

It would have been obvious to one having ordinary skill in the art to select an appropriate thickness of the partition walls as taught by Abe et al or Hamanaka et al in the apparatus of Hamaguchi et al to have a more efficient catalyst carrier.

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Response to Arguments

10. Applicant's arguments with respect to claims 1, 3, 5, 7-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

Hien Tran

HT
June 15, 2003

**Hien Tran
Primary Examiner
Art Unit 1764**